



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,106	11/17/2003	Nobuo Fujita	117253	9765
25944	7590	05/16/2007		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER MERCADO, JULIAN A	
			ART UNIT 1745	PAPER NUMBER
			MAIL DATE 05/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/713,106

Applicant(s)

FUJITA ET AL.

Examiner

Julian Mercado

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2-20-07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7-8-05</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1745

DETAILED ACTION

Remarks

This Office action is responsive to applicant's amendment filed on February 20, 2007.

Claims 1-21 are pending.

Information Disclosure Statement

The document CN 1359546A as cited in the July 8, 2005 Information Disclosure Statement has been considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 17 has been amended to recite the controlling means as prohibiting the start of the fuel cell system by isolating the gas supply-discharge portion. This limitation is considered new matter. There appears to be no support for "isolating the gas supply-discharge portion"

Art Unit: 1745

other than stopping or shutting off the discharge valve [26]. (emphasis added) See the specification, par. [0030].

Claims 18-21 are rejected under 35 U.S.C. 112, first paragraph, as being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 112

The rejection of claim 6 under 35 U.S.C. 112, second paragraph has been withdrawn.

(new rejection)

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the supply of hydrogen" in line 9. There is insufficient antecedent basis for this limitation in the claim. Claim 14 in line 8 and claim 21 in line 2 recites an identical limitation and are thus rejected for having insufficient antecedent basis on similar grounds.

Claim 17 recites the limitation "isolating the gas supply-discharge portion" in lines 9-10. The meaning of the term "isolating" is unclear, as this term is precluded from being read in light of the original specification.

Claims 2-13, 15, 16 and 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being dependent upon a rejected base claim.

Claim Rejections - 35 USC § 102 and 103

The rejection of claims 1-8, 12 and 14-20 under 35 U.S.C. 102(e) based on Wheat et al. (U.S. Pat. 6,727,013 B2) has been withdrawn.

The rejection of claims 9-11 under 35 U.S.C. 103(a) based on Wheat et al. and Fuglevand et al. (U.S. Pat. 6,428,918 B1) has been withdrawn.

The rejection of claim 13 under 35 U.S.C. 103(a) based on Wheat et al. and Fletcher et al. (U.S. Pat. 5,798,186) has been withdrawn.

In withdrawing the prior art ground of rejection(s), the examiner notes the present amendment to claim 1 now reciting that the controller operates the gas supply-discharge portion at a time an operation for starting the fuel cell is initiated wherein the controller prohibits the start of the fuel cell system by stopping the supply of hydrogen when a freeze is detected in the gas supply-discharge portion. The examiner concedes with applicant's assertion that Wheat teachings away from stopping the supply of hydrogen insofar as the supply of hydrogen is necessary for heating. To this extent, while the controller in Wheat et al. is considered to detect a freeze by measuring the stack temperature and operating the gas supply-discharge portion at a time of start-up, insofar as controller performs its programmed steps "until heating is no longer necessary" and "[b]efore running the fuel cell...", Wheat et al. is considered to teach the opposite of applicant's claimed invention as presently amended, i.e. by stopping the supply of hydrogen when a freeze is detected in the gas supply-discharge portion, since in Wheat et al. the "fuel cell controller 160 operates the fuel cell stack 102 until the desired heating has occurred." See col. 5 lines 42-64 and col. 6 lines 21-31. Wheat et al. actively supplies hydrogen during freezing

Art Unit: 1745

conditions and even does so up to the point where there is no longer sufficient hydrogen available, at which point engine startup is prohibited. (col. 6 lines 35-40)

Allowable Subject Matter

Claims 1-16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest the instant invention regarding a fuel cell system having a controller which prohibits the start of the fuel cell system by stopping the supply of hydrogen when a freeze is detected in a gas supply-discharge portion.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 7-169476 is cited to teach prevention of a freezing condition in a fuel cell by circumventing the reactant fuel to a heat retaining operating. U.S. Pat. 6,068,941 to Fuller et al. is cited of cumulative relevance. U.S. Pat. 6,855,444 B2, while not qualifying as prior art, is cited of cumulative relevance.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

Art Unit: 1745

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER